

Application No. 09/996,208  
Amendment dated February 10, 2005  
Reply to Office Action of November 26, 2004

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listing, of claims in the application:

**Listing of Claims:**

Claim 1 (Previously Amended): A method comprising:  
at a router having at least two interfaces and that connects multiple communication links to one another:  
identifying at least one active communication link to provide an identified active communication link;  
automatically identifying whether the router needs a new address prefix for the identified active communication link.

Claim 2 (Original): The method of claim 1 wherein identifying at least one active communication link includes identifying a plurality of active communication links to provide a plurality of identified active communication links.

Claim 3 (Original): The method of claim 2 wherein automatically identifying whether the router needs a new address prefix includes identifying whether the router needs a new address prefix for each of the plurality of identified active communication links.

Claim 4 (Original): The method of claim 1 wherein automatically identifying whether the router needs a new address prefix for the identified active communication link includes automatically determining whether the router needs to advertise a new address prefix for use by link endpoints.

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Claim 5 (Original): The method of claim 1 wherein automatically determining whether the router needs a new address prefix includes automatically determining when the router has not received a prefix advertisement from another router for the same active communication link.

Claim 6 (Original): The method of claim 5 wherein automatically determining when the router has not received a prefix advertisement from another router for the same active communication link includes automatically determining when the router has not received a prefix advertisement from another router for the same active communication link within a predetermined period of time.

Claim 7 (Original): The method of claim 4 wherein automatically determining whether the router needs to advertise a new address prefix for use by link endpoints includes automatically determining whether the router needs to advertise an address prefix for use by link endpoints by soliciting at least one router to advertise.

Claim 8 (Currently Amended): A method to automatically support automatic configuration of a network router having at least two interfaces and that connects multiple communication links to one another comprising:

at the network router:

automatically assessing each router link to identify active communication links;  
~~wherein an active communication link can support communications but need not be coupled to an endpoint or another router when so identified;~~ to provide identified active communication links;

for each identified active communication link:

automatically identifying whether the router needs to support the identified active communication link;

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for each identified active communication link that is identified as needing support, automatically identifying whether that identified active communication link requires at least one network address prefix.

Claim 9 (Original): The method of claim 8 wherein automatically identifying whether the router needs to support the identified active communication link includes automatically monitoring the identified active communication link for prefix advertisements from another router that is supporting communications for the identified active communication link.

Claim 10 (Original): The method of claim 9 wherein automatically identifying whether the router needs to support the identified active communication link includes automatically determining that the router needs to support the identified active communication link when no other router has transmitted a prefix advertisement for the monitored identified active communication link.

Claim 11 (Previously Amended): A router comprising:  
at least two interfaces such that the router connects multiple communication links to one another;

first means for automatically identifying at least one active communication link to provide an identified active communication link; and

second means for automatically identifying when the router needs to provide a new address prefix for the identified active communication link.

Claim 12 (Original): The router of claim 11 wherein the first means is further for automatically identifying a plurality of active communication links to provide a plurality of identified active communication links.

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Claim 13 (Original): The router of claim 11 wherein the second means is further for automatically identifying when the router needs to provide a new address prefix for each of the plurality of identified active communication links.

Claim 14 (Original): The router of claim 11 wherein the second means is further for automatically determining when the router needs to advertise a new address prefix for use by link endpoints.

Claim 15 (Original): The router of claim 11 wherein the second means is further for automatically determining when the router needs to advertise a new address prefix for use by at least one link endpoint by soliciting at least one other router to advertise.

Claim 16 (Currently Amended): The method of claim 1 ~~wherein automatically identifying whether the router needs a new address prefix for the identified active communication link further comprises automatically determining whether the router needs a new address prefix for the identified active communication link~~ wherein an address prefix serves as a component of addresses on a communication link to allow endpoints and routers to generate new addresses for use on that communication link and wherein the router needs a new address prefix when no address prefix has been previously established for the identified active communication link.

Claim 17 (Currently Amended): The method of claim 4 ~~wherein automatically determining whether the router needs to advertise a new address prefix for use by link endpoints further comprises determining whether the router needs to advertise a new address prefix~~ wherein a router advertises a prefix on an identified active communication link by sending a message containing the prefix to all nodes present on the communication link.

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Claim 18 (Currently Amended): The method of claim 8 ~~wherein automatically identifying whether the router needs to support the identified active communication link further comprises automatically identifying whether the router needs to support the identified active communication link~~ wherein a router supports an active communication link by advertising an address prefix on that communication link and by facilitating packet-forwarding activities between the communication links via the router.